

The Children's Healthline

communicating today's environmental problems to protect our children's future



Are our recreational waters safe for our children?

It's that time of year again. Water! Water! Water! For many children, water is irresistible, and in summer becomes their second environment. During the hottest months, children spend lots of time playing, swimming and fishing in our lakes, rivers and oceans. But because our waters are not always as clean as we believe, children may be exposed to various pollutants. And, as their young bodies are still developing, they are the group most at risk from water pollutants and contaminated fish.

What are the concerns related to swimming?

Most parents assume that the water at public beaches is clean and safe for their children unless they hear differently and, in general, this is true. Water quality monitoring, conducted by various state, county or local health or environmental agencies, has led to the closing of numerous beaches in the U.S. each year, helping to protect swimmers from many harmful pollutants. There is concern, however, about the consistency of the various monitoring programs. Some areas have good monitoring and posting programs, while others have inadequate programs or none at all. Pending national legislation would provide swimmers with greater protection, improving consistency and quality of monitoring programs by requiring the adoption of EPA's recommended methodologies and water quality criteria.

*The non-profit Clean Beaches Council has awarded all of Delaware's ocean beaches their Blue Wave Award for 1999 and 2000. Assateague Island National Seashore (MD/VA) also received the award. Over the last several years, **none of the ocean beaches in Region III states have reported closings or advisories.***

For all recreational waters it is important to remember that **pollutants are usually at their highest levels after heavy rains**. This is when contaminants (including sewage overflows, pesticides, animal waste, trash, etc.) are washed off the land and into the water. Beaches along rivers and small lakes and those ocean beaches near river mouths and sewer or stormwater outfalls (drainage pipe outlets) are most affected.

Normally, swimming-related illnesses are relatively minor and have no long-term effects. The greatest risk to children who swim or play in polluted waters is from bacteria and other pathogens. *Gastroenteritis; ear, eye, nose and throat infections; and non-specific urethritis* are among the more common, easily treatable illnesses. In highly polluted waters, swimmers may be exposed to more serious threats, such as *dysentery, hepatitis, cholera and typhoid fever*; however, such exposures are rare in the U.S.

What can a parent do?

Be sure that the beach regularly monitors water quality before taking children swimming.

Avoid swimming at beaches after heavy rains, particularly where the water is still murky or there are nearby discharge pipes.

Keep diaper-wearing children out of public swimming areas (unless they're wearing tight-fitting rubber pants) and don't change diapers on the beach - use restrooms.

As most swimmers are exposed to pathogens by swallowing the water, children are less likely to get sick if they ***wade or swim without submerging their heads***.

Since pathogens can more easily enter the body through skin lacerations, parents may want to ***keep children with open cuts and wounds out of the water***.

Swimming pools/water parks. While public pools are normally safe because of frequent monitoring and other oversight, fecal accidents occasionally result in disease outbreaks. Avoid pools where restrictions on diaper-aged children are not enforced.



What are the concerns relating to eating fish we catch?

Fish, a lean, low-calorie source of protein, is an important part of a healthy diet. Some sport fish caught in the nation's lakes, rivers, oceans, and estuaries, however, may contain chemicals that could pose health risks if these fish are eaten in large amounts. Larger and older fish tend to have the highest accumulations of toxics. Because our lakes and rivers have often been more directly subjected to pollution, and because

their smaller size results in less dilution, freshwater fish tend to have higher levels of contaminants than those caught in the ocean. **Children in families of avid sports fishermen who regularly consume fish and those relying on subsistence fishing are at an increased risk for adverse health effects.**

When contaminated fish are consumed by children or pregnant women, it is possible that toxic chemicals may accumulate in the body and cause harmful health effects. Mercury and PCBs are two of the most common fish contaminants. Studies have linked *cerebral palsy, severe mental retardation, neurodevelopmental delays and seizures* in children with accidental prenatal exposures to very high levels of mercury. Studies have also found that children exposed to PCBs in the womb from maternal ingestion of fish have lower IQs than children whose mothers didn't eat contaminated fish.

What can a parent do?

Check fish advisories before you go fishing and adhere to their guidance. These are usually issued by State health or environmental departments. This is especially important for young children, but also for women of childbearing age, pregnant women and nursing mothers, because toxics can be passed on to the fetus or nursing infant.

Reduce your children's consumption of fish species known to contain high levels of toxics. Among saltwater fish, these tend to be large predators such as tuna, swordfish, shark and bluefish. Among freshwater fish, bottom feeders and fatty species are most likely to accumulate contaminants; these include rainbow and lake trout, catfish and carp. In general, smaller fish within a species contain lower concentrations of contaminants than larger fish.

Clean and cook your fish properly to reduce possible exposure to contaminants. As most pollutants (including PCBs and dioxin) build up in a fish's fatty tissues, remove skin and fat before cooking. The fat is found just under the skin, in the belly, and along the backbone and the sides of the fish. Rather than frying, bake or broil fish so that the remaining fat drips away from the fish. Avoid or reduce the amount of fish drippings or broth that you use to flavor the meal. Some toxics, such as mercury, concentrate in the muscle tissue and the only way to reduce exposure is to limit consumption or eat smaller, younger fish. Fish advisories will tell you what contaminants are of concern and in what species. Because toxics have been found to some degree in every water body in the world that has been tested, it might be prudent to follow these fish preparation recommendations for all fish eaten.

Going crabbing? To reduce possible exposure to contaminants, remove the green gland (hepatopancreas) before cooking and do not use the cooking water for sauces or soups.

Space out meals containing fish with possible toxics in accordance with fish advisories. With sufficient time between exposures, the body can naturally rid itself of some pollutants.

One Final Thought:

While children are at some health risk from water pollution and contaminated fish, they are at greater risk from water-related accidents. Never allow children to swim in unsupervised or undesignated swimming areas. Strong currents, deep holes and submerged rocks, trees, and sharp objects create another set of hazards and can result in serious injury and even drowning. Diving outside of designated, supervised areas is especially dangerous.

Sources of Additional Information:

Beach Monitoring:

National (EPA): www.epa.gov/OST/beaches/

DE: (800) 922-WAVE

NJ: state.nj.us/dep/watershedmgt/beach_monitoring.htm

MD: (410) 632-1200x166 (Ocean City), (410) 641-1443x 212 (Assateague Island)

VA: (804) 698-4109; (757) 518-2646 (Virginia Beach)

Inland beaches (lakes, rivers, estuaries): there are no centralized monitoring agencies; you'll need to call the local park.

Fish Advisories:

National (EPA): www.epa.gov/OWOW/fish/

DE: www.dnrec.state.de.us/entryfsh.htm

PA: www.state.pa.us/dep/deputate/watermgt/WC/subjects/fishadvisory.htm

MD: www.mde.state.md.us/reference/factsheets/fishcontam.html

VA: www.dgif.state.va.us/fishing/regs/section8.html

WV: www.dnr.state.wv.us/wvfishing/waters.htm

NJ: www.state.nj.us/dep/dsr/fish-crab.htm

Great Lakes: www.great-lakes.net/envt/wildlife/fishadvis.html

Or call the local or state environmental health department to see if any advisories are posted in areas where you plan to fish.